

FIGURE 1A

ABCA6 nucleotide sequence

Sequence range: 1 to 5332

TACACCCCTTTTCAGAAACCAGGCTGTGTAAGAGCTGCTGGAGTAGGCACCCATTTAAAGAAAA
AATGAAGAAGCAGCAATAAAGAAGTTGTAATCGTTACCTAGACAAACAGAGAAGTGGTTTTGAC
AGTGTCTTAGAGTGCTTTTTATTATTTTCCTGACAGTTGTGTTCCACCATGATTACTTTCTCC
TTCAGCGAATAGGCTAAATGAATATGAAACAGAAAAGCGTGTATCAGCAAACCAAAGCACTTCT
GTGCAAGAATTTTCTTAAGAAATGGAGGATGAAAAGAGAGAGCTTATTGGAATGGGGCCTCTCA
ATACTTCTAGGACTGTGTATTGCTCTGTTTTCCAGTTCCATGAGAAATGTCCAGTTTCTTGGA
TGGCTCCTCAGAATCTGGGAAGGGTAGATAAATTTAATAGCTCTTCTTTAATGGTTGTGTATAC
ACCAATATCTAATTTAACCAGCAGATAATGAATAAAACAGCACTTGCTCCTCTTTTGAAAGGA
ACAAGTGTCATTGGGGCACCAATAAAACACACATGGACGAAATACTTCTGGAAAATTTACCAT
ATGCTATGGGAATCATCTTTAATGAACTTTCTCTTATAAGTTAATATTTTTCCAGGGATATAA
CAGTCCACTTTTGAAAGAAGATTTCTCAGCTCATTGCTGGGATGGATATGGTGAGTTTTTCATGT
ACATTGACCAAATACTGGAATAGAGGATTTGTGGCTTTACAAACAGCTATTAATACTGCCATTA
TAGAAATCACAACCAATCACCTGTGATGGAGGAGTTGATGTCAGTTACTGCTATAACTATGAA
GACATTACCTTTTATAACTAAAAATCTTCTTCAATGAGATGTTTATTTTATTCTTCTTGCTT
CATTTCTCCCCACTTGATATATTTTATATCACTCAATGTAACAAAAGAGAGAAAAAAGTCTAAGA
ATTTGATGAAAATGATGGGTCTCCAAGATTCAGCATTCTGGCTCTCCTGGGGTCTAATCTATGC
TGGCTTCATCTTTATTATTTCCATATTCATTACAATTATCATAACATTCACCCAAATTATAGTC
ATGACTGGCTTCATGGTCATATTTATACTCTTTTTTTTTATATGGCTTATCTTTGGTAGCTTTGG
TGTTCTCTGATGAGTGTGCTGTTAAAGAAAGCTGTCTCACCAATTTGGTTGTGTTTCTCCTTAC
CCTCTTTTGGGGATGTCTGGGATTCAGTGTATTTTATGAACACCTTCCTTCATCTCTGGAGTGG
ATTTTGAATATTTGTAGCCCTTTTGCCTTTACTACTGGAATGATTCAGATTATCAAACCTGGATT
ATAACTTGAATGGTGTAATTTTTCCTGACCCTTCAGGAGACTCATATACAATGATAGCAACTTT
CTCTATGTTGCTTTTGGATGGTCTCATCTACTTGCTATTGGCATTATACTTTGACAAAATTTTA
CCCTATGGAGATGAGCGCCATTATTCTCCTTTATTTTTCTTGAATTCATCATCTTGTTTCCAAC
ACCAAAGGACTAATGCTAAGGTTATTGAGAAAGAAATCGATGCTGAGCATCCCTCTGATGATTA
TTTTGAACCAGTAGCTCCTGAATTCCAAGGAAAAGAAGCCATCAGAATCAGAAATGTTAAGAAG
GAATATAAAGGAAAATCTGGAAAAGTGGAAAGCATTGAAAGGCTTGCTCTTTGACATATATGAAG
GTCAAATCACGGCAATCCTGGGTACAGTGGAGCTGGCAAATCTTCACTGCTAAATATTCTTAA
TGGATTGTCTGTTCCAACAGAAGGATCAGTTACCATCTATAATAAAAATCTCTCTGAAATGCAA
GACTTGGAGGAAATCAGAAAGATAACTGGCGTCTGTCTCAATTCAATGTTCAATTTGACATAC
TCACCGTGAAGGAAAACCTCAGCCTGTTTGCTAAAATAAAAGGGATTTCATCTAAAGGAAGTGGA
ACAAGAGGTACAACGAATATTATTGGAATTGGACATGCAAAACATTCAAGATAACCTTGCTAAA
CATTTAAGTGAAGGACAGAAAAGAAAGCTGACTTTTGGGATTACCATTTTAGGAGATCCTCAA
TTTTGCTTTTAGATGAACCAACTACTGGATTGGATCCCTTTTCCAGAGATCAAGTGTGGAGCCT
CCTGAGAGAGCGTAGAGCAGATCATGTGATCCTTTTTCAGTACCCAGTCCATGGATGAGGCTGAC
ATCCTGGCTGATAGAAAAGTGATCATGTCCAATGGGAGACTGAAGTGTGCAGGTTCTTCTATGT
TTTTGAAAAGAAGGTGGGGTCTTGATATCACCTAAGTTTACATAGGAATGAAATATGTAACCC
AGAACAAATAACATCCTTCATTACTCATCACATCCCCGATGCTAAATTA AAAACAGAAAACAAA
GAAAAGCTTGATATACTTTGCCACTGGGAAGGACAAATACATTTCCAGATCTTTTCAGTGATC
TGGATAAGTGTTCTGACCAGGGAGTGACAGGTTATGACATTTCCATGTCAACTCTAAATGAAGT

FIGURE 1B

CTTTATGAAACTGGAAGGACAGTCAACTATCGAACAAGATTTTGAACAAGTGGAGATGATAAGA.
GACTCAGAAAGCCTCAATGAAATGGAGCTGGCTCACTCTTCCTTCTCTGAAATGCAGACAGCTG
TGAGTGACATGGGCCTCTGGAGAATGCAAGTCTTTGCCATGGCACGGCTCCGTTTCTTAAAGTT
AAAACGTCAAACATAAGTGTTATTGACCCTATTATTGGTATTTGGAATCGCAATATTCCTTTG
ATTGTTGAAAATATAATATATGCTATGTTAAATGAAAAGATCGATTGGGAATTTAAAAACGAAT
TGTATTTTCTCTCTCCTGGACAACCTCCCCAGGAACCCCGTACCAGCCTGTTGATCATCAATAA
CACAGAATCAAATATTGAAGATTTTATAAAATCACTGAAGCATCAAATATACTTTTGGAGTA
GATGACTTTGAAAACAGAAATGGTACTGATGGCCTCTCATACAATGGAGCTATCATAGTTTCTG
GTAAACAAAAGGATTATAGATTTTTCAGTTGTGTGTAATACCAAGAGATTGCACTGTTTTCCAAT
TCTTATGAATATTATCAGCAATGGGCTACTTCAAATGTTTAATCACACACAACATATTCGAATT
GAGTCAAGCCCATTTCTCTTAGCCACATAGGACTCTGGACTGGGTGGCGGATGGTTCCTTTT
TCTTATTTTTTGGTTCTATGTAGCATTCTCTCCTTATATCACCATGGGCAGCATCAGTGATTACAA
GAAAAATGCTAAGTCCCAGCTATGGATTTTCAGGCCTCTACACTTCTGCTTACTGGTGTGGGCAG
GCACTAGTGGACGTCAGCTTCTTCATTTTAATTCTCCTTTTAATGTATTTAATTTTCTACATAG
AAAACATGCAGTACCTTCTTATTACAAGCCAAATTGTGTTTGCTTTGGTTATAGTTACTCCTGG
TTATGCAGCTTCTCTTGTCTTCTTCATATATATGATATCATTTATTTTTCGCAAAAGGAGAAAA
AACAGTGGCCTTTGGTCAATTTTACTTCTTTTTTGCCCTCCACCATCATGTTTTCCATCACTTTAA
TCAATCATTTTGGACCTAAGTATATTGATTACCACCATGGTATTGGTTCCTTCATATACCTTGCT
TGGATTTAAACTTTTTTGGAGTGAGAGACCAGGAGCACTACAGAGAATTTCCAGAGGCAAAAT
TTTGAATTGAGTGCCACTGATTTTCTAGTCTGCTTCATACCCTACTTTTCAGACTTTTGCTATTCTG
TTTTTGTCTAAGATGCATGGAACATAAATGTGGAAAGAAAAGAATGCGAAAAGATCCTGTTTT
CAGAATTTCCCCCAAAGTAGAGATGCTAAGCCAAATCCAGAAGAACCATAGATGAAGATGAA
GATATTCAAACAGAAAGAAATAAGAACAGCCACTGCTCTGACCACTTCAATCTTAGATGAGAAAC
CTGTTATAATTGCCAGCTGTCTACACAAAGAATATGCAGGCCAGAAGAAAAGTTGCTTTTCAA
GAGGAAGAAGAAAATAGCAGCAAGAAATATCTCTTCTGTGTTCAAGAAGGTGAAATTTTGGGA
TTGCTAGGACCCAGTGGTGCTGGAAAAAGTTCATCTATTAGAATGATATCTGGGATCACAAAGC
CAACTGCTGGAGAGGTGGAACGAAAGGCTGCAGTTCAGTTTGGGCCACCTGGGGTACTGCCC
TCAAGAGAACGTGCTGTGGCCCATGCTGACGTTGAGGGAACACCTGGAGGTGTATGCTGCCGTC
AAGGGGCTCAGGAAAGCGGACGCGAGGCTCGCCATCGCAAGATTAGTGAGTGCTTTCAAACCTGC
ATGAGCAGCTGAATGTTCTGTGCAGAAATTAACAGCAGGAATCACGAGAAAGTTGTGTTTTGT
GCTGAGCCTCCTGGGAAACTCACCTGTCTTGCTCCTGGATGAACCATCTACGGGCATAGACCCC
ACAGGGCAGCAGCAAATGTGGCAGGCAATCCAGGCAGTCGTTAAAAACACAGAGAGAGGTGTCC
TCCTGACCACCCATAACCTGGCTGAGGCGGAAGCCTTGTTGTGACCGTGTGGCCATCATGGTGTC
TGGAAGGCTTAGATGCATTGGCTCCATCCAACACCTGAAAAACAGACTTGGCAAGGATTACATT
CTAGAGCTAAAAGTGAAGGAAACGTCTCAAGTGACTTTGGTCCACACTGAGATTCTGAAGCTTT
TCCCACAGGCTGCAGGGCAGGAAAGGTATTCTCTTTGTTAACCTATAAGCTGCCCGTGGCAGA
CGTTTACCCTCTATCACAGACCTTTCACAAATTAGAAGCAGTGAAGCATAACTTTAACCTGGAA
GAATACAGCCTTTCTCAGTGCACACTGGAGAAGGTATTCTTAGAGCTTTCTAAAGAACAGGAAG
TAGGAAATTTTGATGAAGAAATTGATACAACAATGAGATGGAAACTCCTCCCTCATTGAGATGA
ACCTTAAACCTCAAACCTAGTAATTTTTTGTGATCTCCTATAAACTTATGTTTTATGTAATA
ATTAATAGTATGTTAATTTTAAAGATCATTTAAAATTAACATCAGGTATATTTTGTAATTTA
GTTAACAAATACATAAATTTTAAATTTTCTCCTCTCAAACATAGGGGTGATAGCAAACCTG
TGATAAAGGCAATACAAAATATTAGTAAAGTCACCCAAAGAGTCAGGCACTGGGTATTGTGGAA
ATAAACTATATAAACTTAA

FIGURE 2

ABCA6 peptide sequence

Sequence range: 1 to 1617

MNMKQKSVYQQTKALLCKNFLKKWRMKRESLLEWGLSILLGLCIALFSSSMRNVQFPGMAPQNL
GRVDKFNSSSLMVVYTPISNLTQQIMNKTALAPLLKGTSVIGAPNKTHMDEILLENLPYAMGII
FNETFSYKLIFFQGYNSPLWKEDFSAHCWDGYGEFSCITLKYWNRGFVALQTAINTAIIEITTN
HPVMEELMSVTAITMKTLPFITKNLLHNEMFILFFLLHFSPLVYFISLNVTKERKSKNLMKMM
GLQDSAFWLSWGLIYAGFIFIISIFITIIITFTQIIIVMTGFMVIFILFFLYGLSLVALVFLMSV
LLKKAVLTNLVVFLLTFLWGCLGFTVFYEHLPSSLEWILNICSPFAFTTGMIIKLDYNLNGV
IFPDPSGDSYTMIAATFSMLLLDGLIYLLALLALYFDKILPYGDERHYSPLFFLNSSSCFQHQRNA
KVIEKEIDAEHPSDDYFEPVAPEFQGKEAIRIRNVKKEYKGKSGKVEALKGLLFDIYEGQITAI
LGHSGAGKSSLLNILNGLSVPTGSGVTIYNKNLSEMQLLEEIRKITGVCPQFNVQFDILTVKEN
LSLFAKIKGIHLKEVEQEVQRILLELDMQNIQDNLAHLSEGQKRKLTFGITILGDPQIILLDE
PTTGLDPFSRDQVWSLLRERRADHVILFSTQSMDEADILADRVIMSNRGLKACGSSMFLKRRW
GLGYHLSLHRNEICNPEQITSFITHHIPDAKLKTENKEKLVYTLPLGRNTNFPDLFSDLDKCS
QGVTDYDISMSTLNEVFMKLEGQSTIEQDFEQVEMIRDSESLNEMELAHSSSFSEMQTAVSDMGL
WRMQVFAMARLRFLKLKRQTKVLLTLLLVFGIAIFPLIVENIIYAMLNEKIDWEFKNELYFLSP
GQLPQEPRTSLLIINNTESNIEDFIKSLKHQNILLEVDDFENRNGTDGLSYNGAIIIVSGKQKDY
RFSVVCNTRKRLHCFPILMNIIISNGLLQMFNHTQHIRIESSPFPLSHIGLWTGLPDGSFFLFLVL
CSISPYITMGSIISDYKKNKAKSQLWISGLYTSAYWCGQALVDVSFFILILLMYLIFYIENMQYL
LITSQIVFALVIVTPGYAASLVFFIYMISFIFRKRKNSGLWSFYFFFASTIMFSITLINHFDL
SILITTMVLVPSYTLLGFKTFLEVRDQEHYREFPEANFELSATDFLVCFIPYFQTLLFVFLRC
MELKCGKKRMRKDPVFRISPQSRDAKPNPEEPIDEDEDIQTERIRTATALTTSILDEKPVIIAS
CLHKEYAGQKKSCFSKRKKKIAARNISFCVQEGEILGLLGPSGAGKSSSIRMISGITKPTAGEV
ELKGCSSVLGHLGYCPQENVLWPMPLTLREHLEVYAAVKGLRKADARLAIARLVSAFKLHEQLNV
PVQKLTAGITRKLCFVLSLLGNPVLLLDEPSTGIDPTGQQQMWQAIQAVVKNTERGVLTTNHN
LAEAEALCDRVAIMVSGRLRCIGSIQHLKNRLGKDYILELKVKETSQVTLVHTEILKLFPQAAG
QERYSSLLTYKLPVADVPLSQTFHKLEAVKHNFNLEEYSLSQCTLEKVFEELSKEQEVGNFDE
EIDTTMRWKLLPHSDEP